

Shenzhen Qibing Technology Co., Ltd.

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Antenna Recognition Certificate

Number: QBAC20230308001

customer name : Pengwei Video Communications

description : Dual-band antenna

product description : External dual-band antenna; SMA white internal pin with patterned design; 2DB black housing

Company Material Number: Q2458A

Customer ID: DZ. XCXX. 068

Board
Version: V1. 0

date: 2023-3-8

This acknowledgment form cannot be modified

Company	
Research and develop- ment	
Engineering	
Examine and verify	

Client	
Engineering	
Purchase	
Examine and verify	

● Specification Overview

Electrical characteristics	
Frequency	2400MHz ~2500MHz
	5150MHz ~5850MHz
Return loss	<-10
Productiveness	>45%
Gain	2db i
Impedance	50 Ω
Polarization Method	Linear polarization
Material and Mechanical Properties	
Material	Copper
Wire Type	RG178 Coaxial Cable
Terminal Type	SMA
Drawing Size	See the detailed drawings for specifics.
Silk Screen Method	NA
Environmental characteristics	
Storage temperature	- 30 ° C ~ + 85 ° C
FPC welding temperature	Soaking temperature: 280 ± 5°C; Soaking time: 10 seconds
Radio frequency wire welding temperature	320 ± 5°C for 2-3 seconds

● Testing Equipment and Conditions

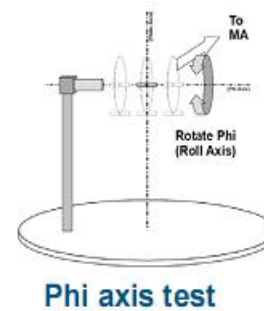
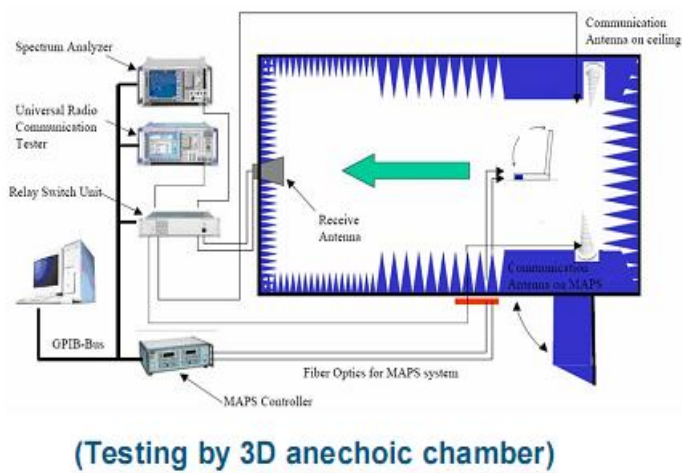
1. network analyzer :

Agilent 8753D Agilent 5071B

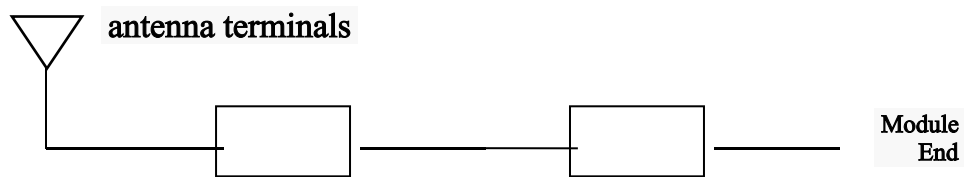
Communication Testing Equipment:

Agilent E5515C R&S CMW500

2. 3D Testing System



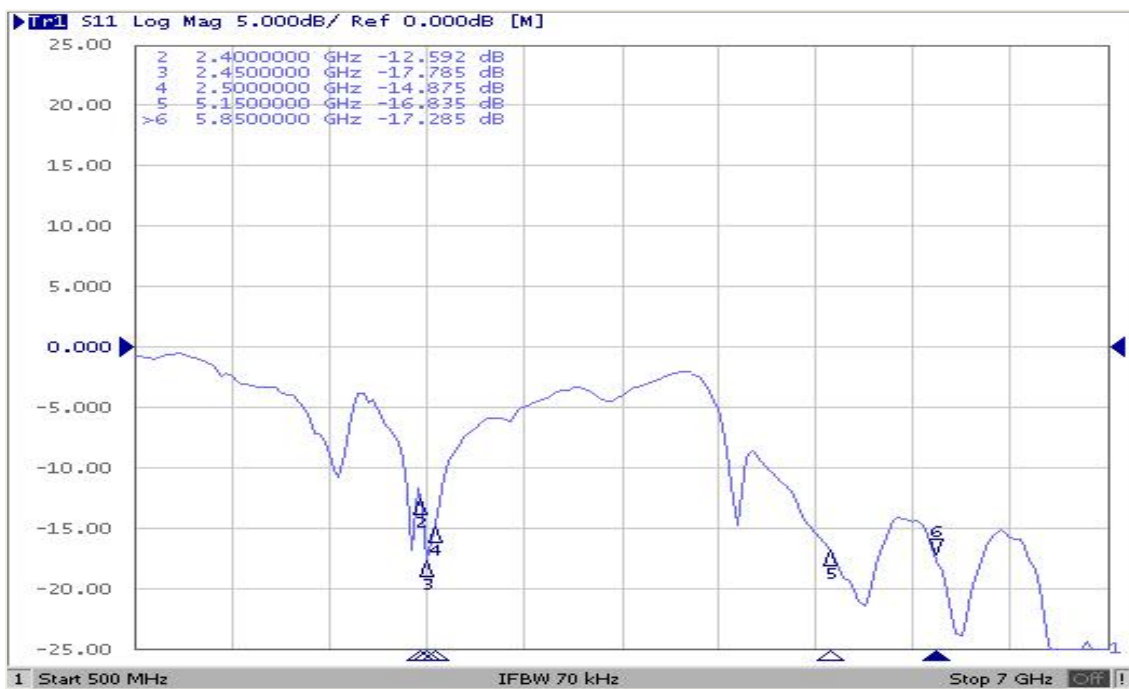
● Matching Circuit



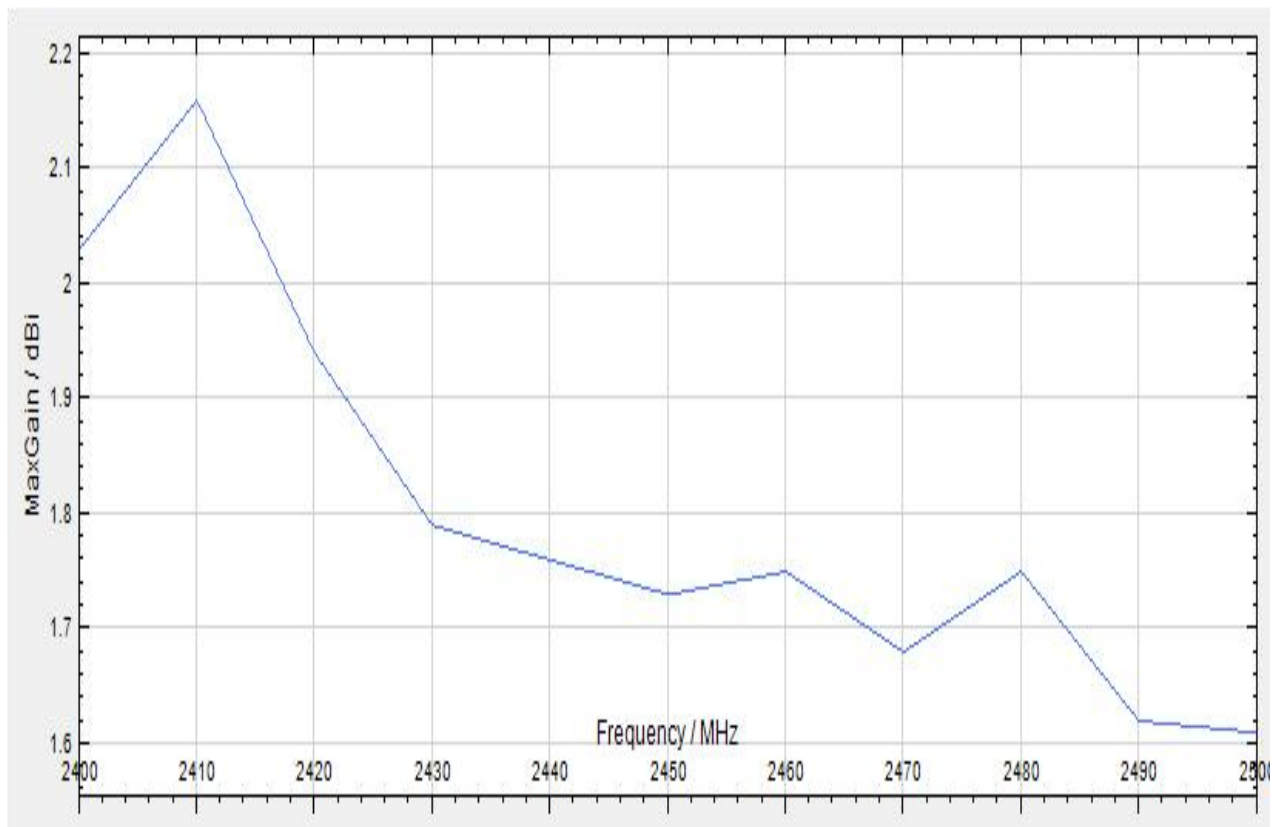
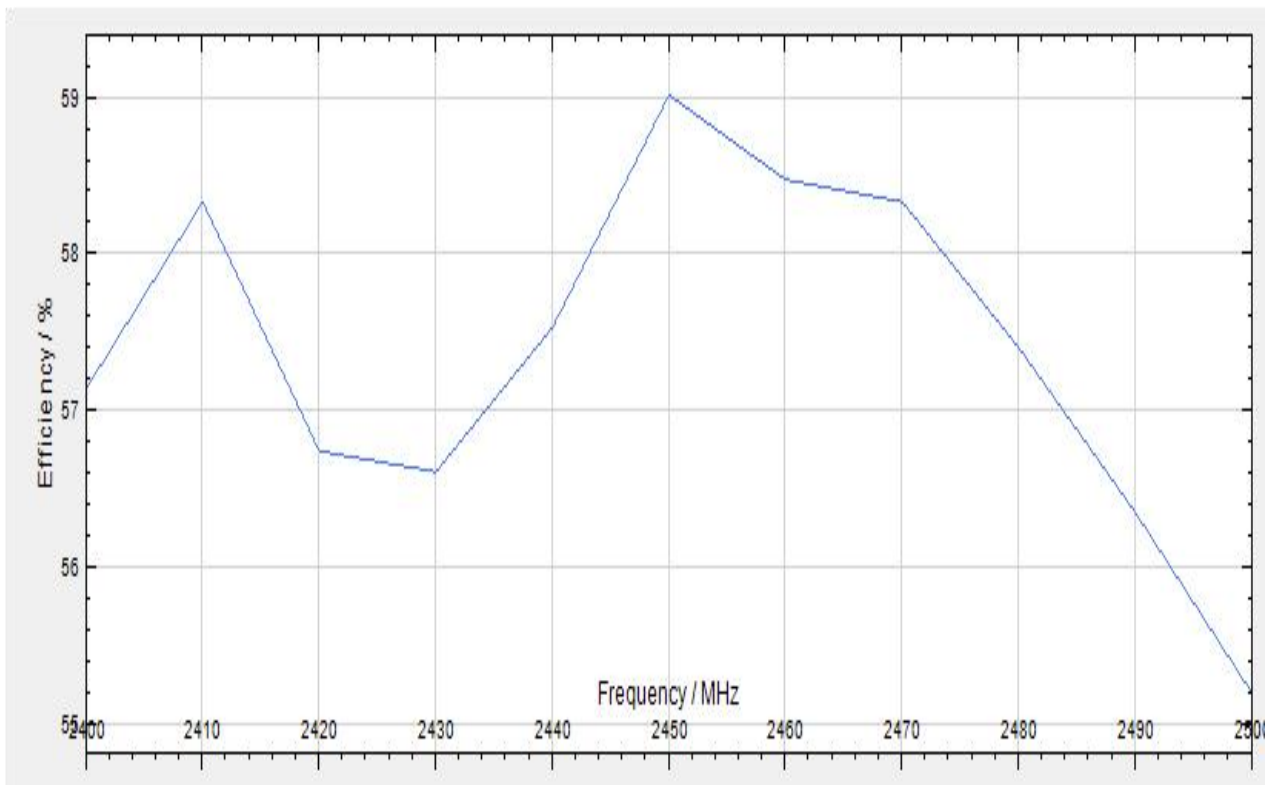
The original motherboard matching circuit remains unchanged.

● Passive Testing Report

Echo Loss Diagram



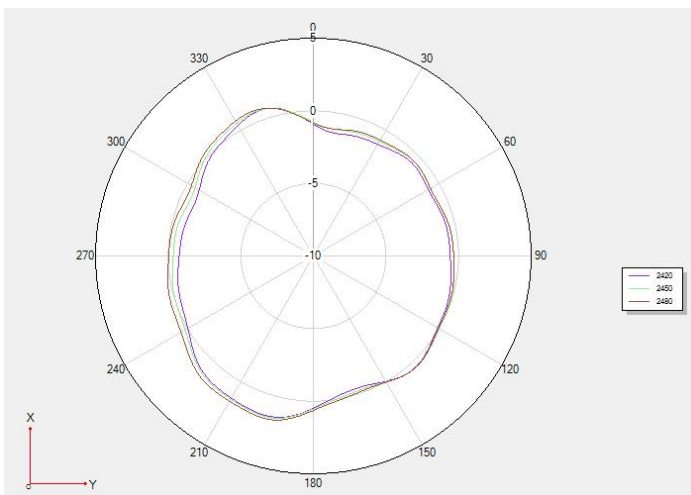
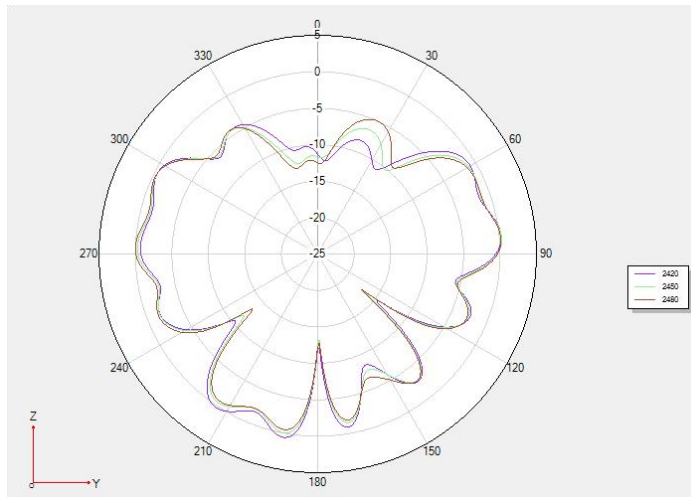
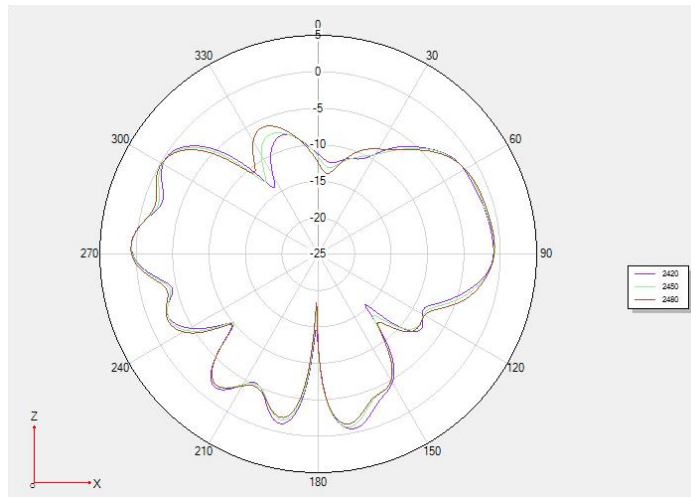
◆ 2.4G Efficiency and gain



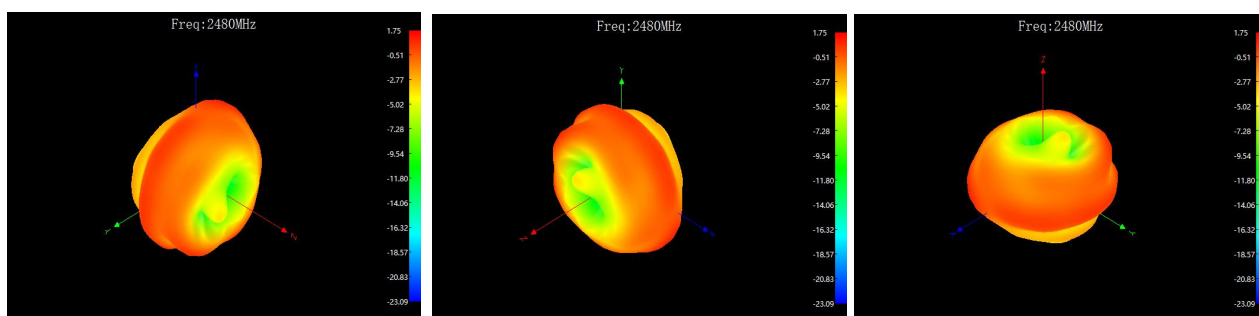
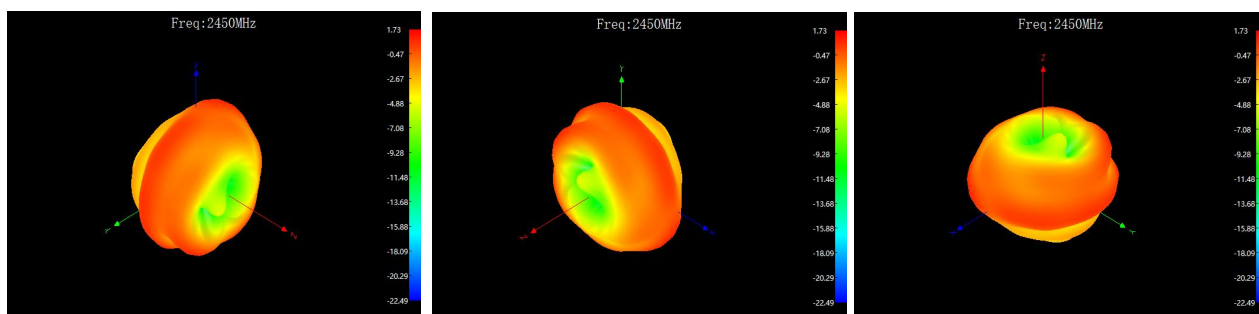
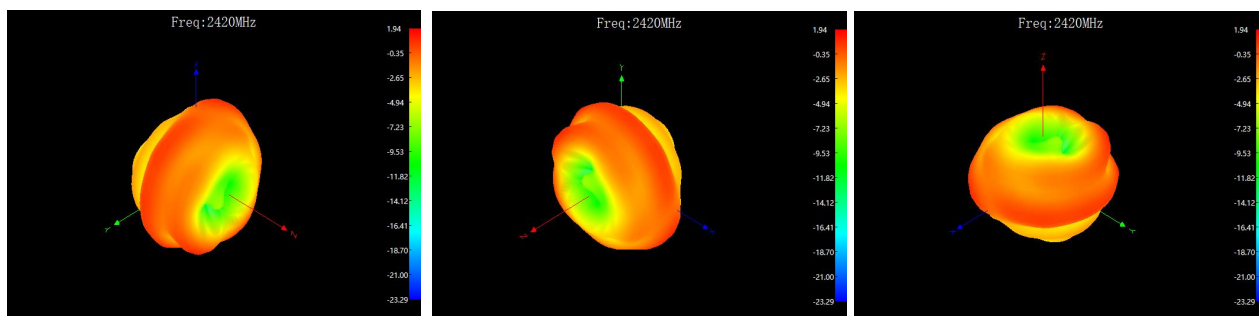
◆ Passive test data

Frequency/Mhz	MaxGain/dBi	Efficiency / %
2400	2.03	57.15
2410	2.16	58.34
2420	1.94	56.75
2430	1.79	56.62
2440	1.76	57.54
2450	1.73	59.02
2460	1.75	58.48
2470	1.68	58.34
2480	1.75	57.41
2490	1.62	56.36
2500	1.61	55.21

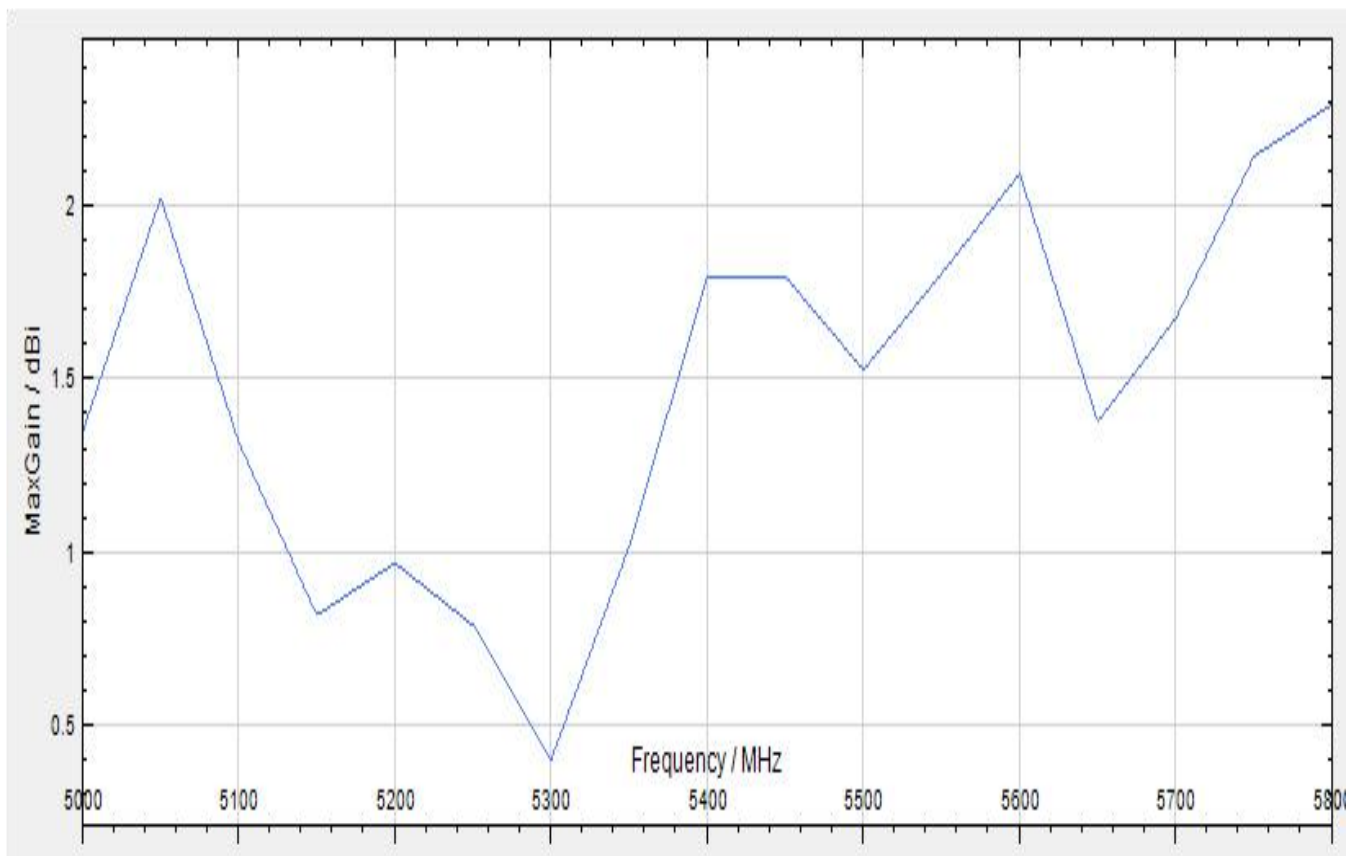
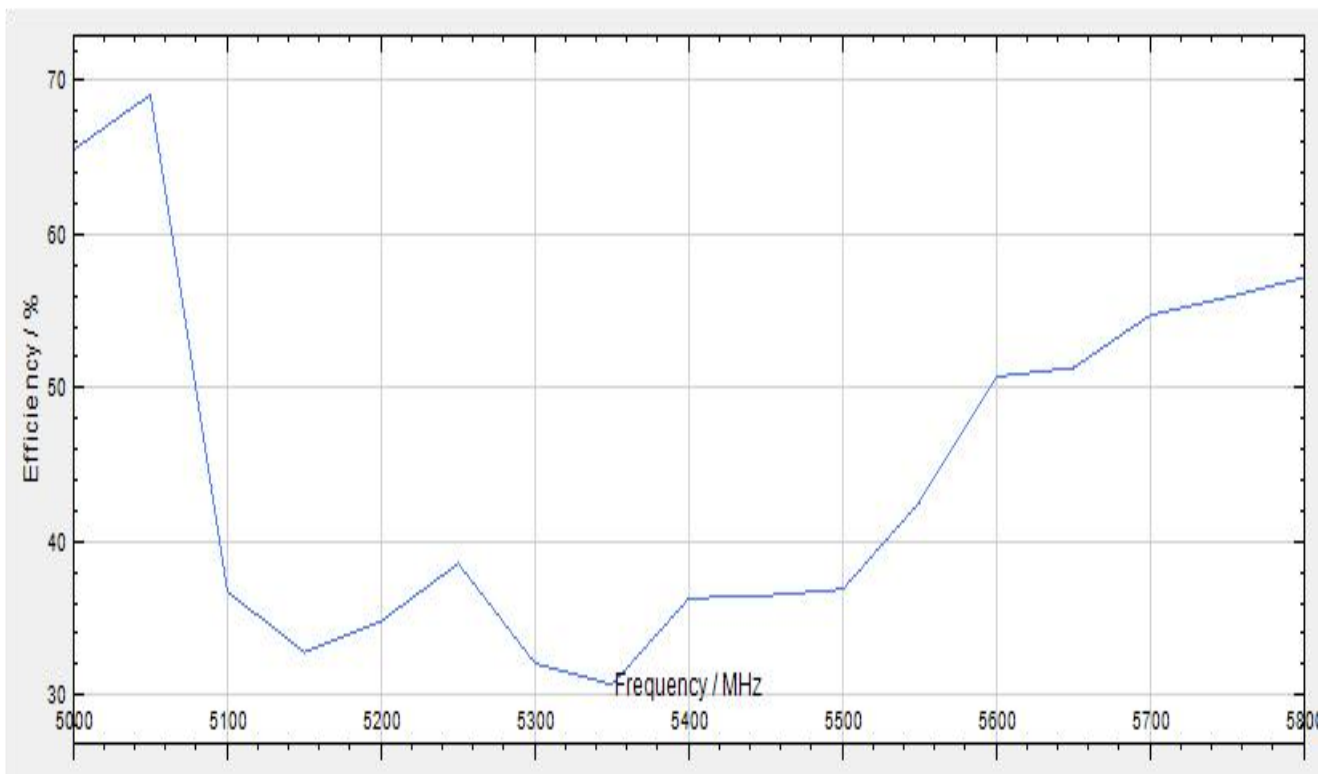
◆ Passive 2D image



◆ Passive 3D image



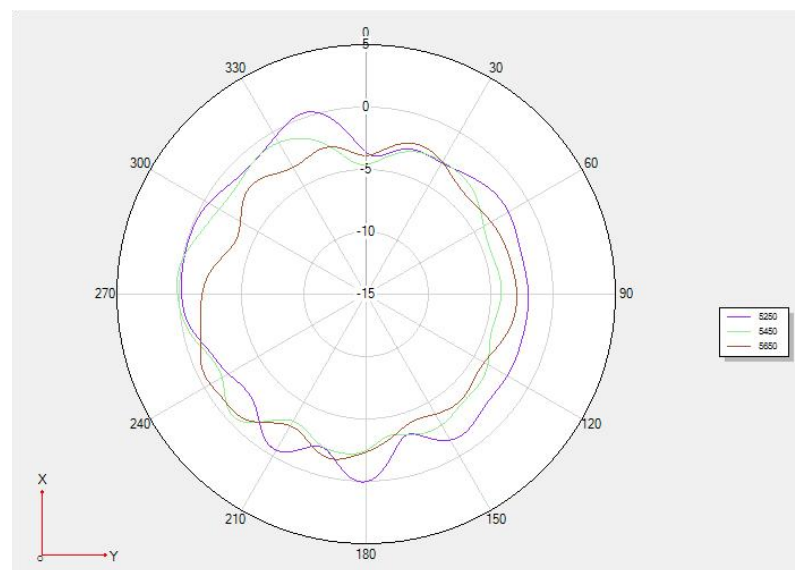
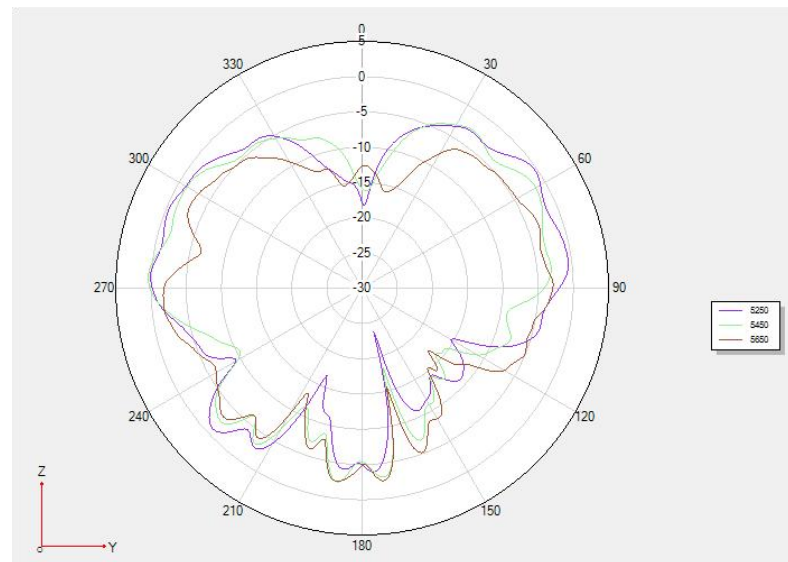
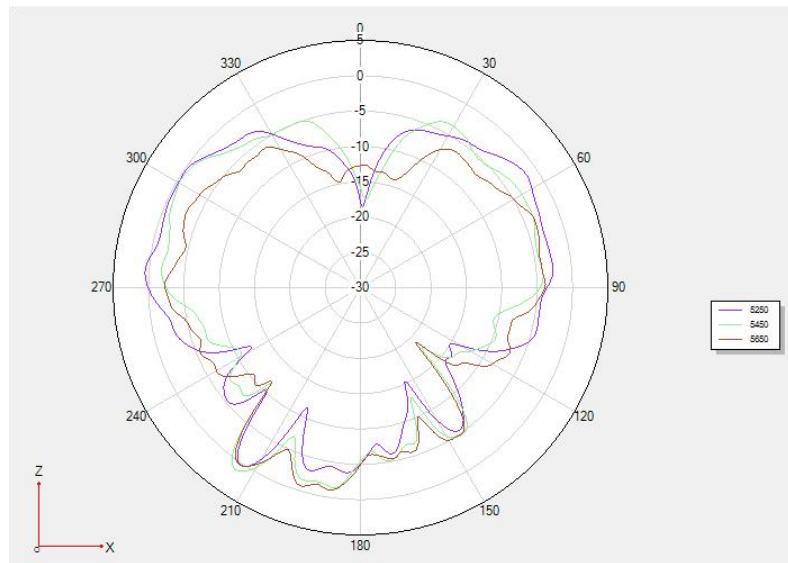
◆ 5G Efficiency and gain



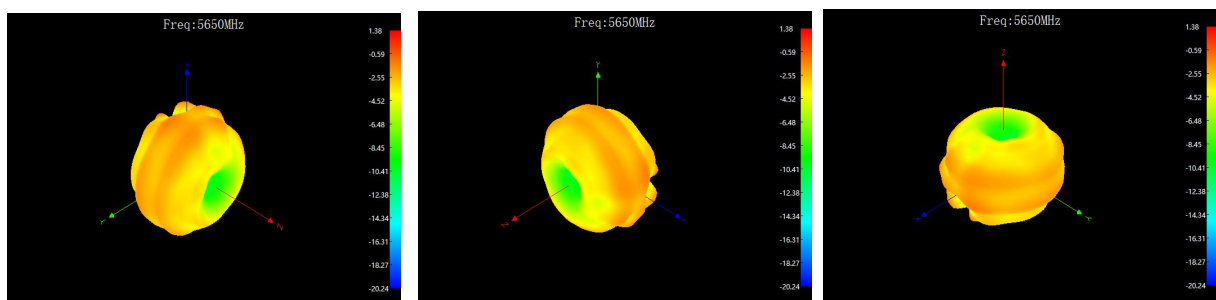
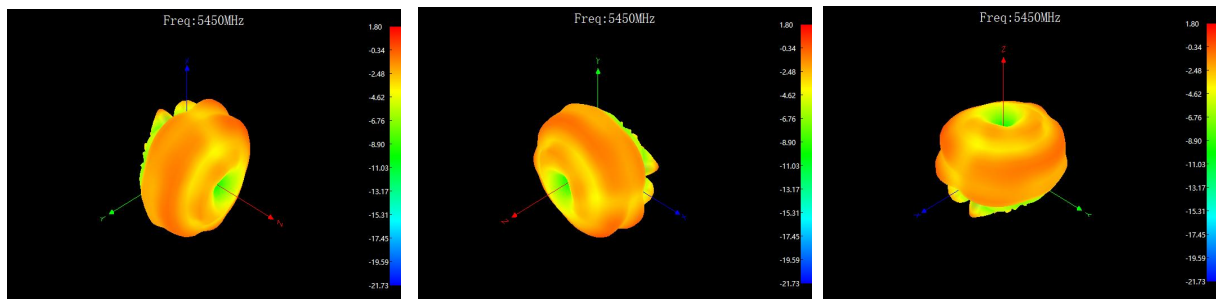
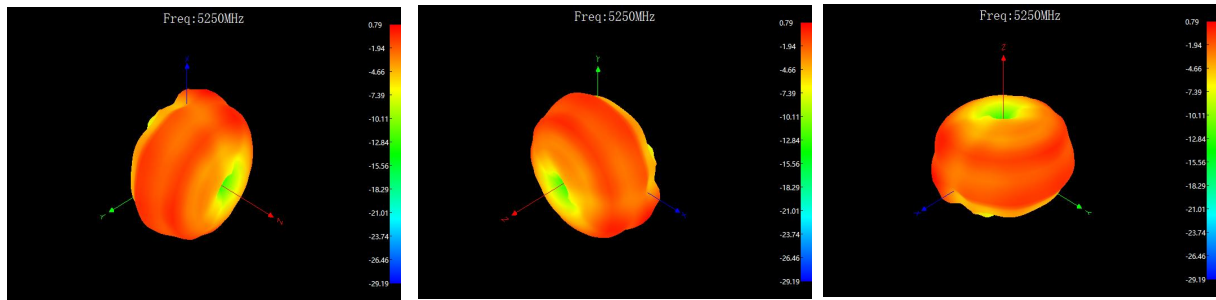
◆ Passive test data

Frequency/Mhz	MaxGain/dBi	Efficiency / %
5000	1.35	65.61
5050	2.03	69.18
5100	1.32	36.81
5150	0.82	32.89
5200	0.97	34.91
5250	0.79	38.64
5300	0.4	32.14
5350	1.02	30.76
5400	1.8	36.39
5450	1.8	36.56
5500	1.53	36.98
5550	1.81	42.66
5600	2.1	50.82
5650	1.38	51.4
5700	1.68	54.83
5750	2.24	55.98
5800	2.3	57.28

◆ Passive 2D image



◆ Passive 3D image



- Size

Technical drawing of a cylindrical antenna assembly. The drawing includes a side view and a cross-sectional view. The side view shows a cylinder with a total length of 109mm and a diameter of 9.9mm. A label "RG178线" points to a section of the cylinder. The cross-sectional view shows the internal structure, including a black inner thread and an inner needle. A label "黑色内螺纹, 内针" points to this internal feature. The drawing is enclosed in a frame with a title block at the top left and a revision table at the bottom left.

Rev	Description	Date	Remark
A	New drawing		

Third Angle	Project	Date
0~10	±0.05	0.02
10~18	±0.10	0.03
18~30	±0.12	0.02
30~40	±0.15	0.04
40~	±0.20	±0.5

Part Name	Part No.	Material	DWG No.
WiFi天线			

Designed by	Checked by	Approved by
MD	RF	

Unit	mm	Scale	Rev
		1:1	A